

CLAIMS

What is claimed is:

1. A system that facilitates the generation of meaningful description for a flattened data structure, comprising:
 - a data structure having a plurality of data nodes;
 - a valuation component that assigns a valuation to one or more of the data nodes in accordance with a predetermined metric; and
 - a description component that generates a description that represents at least one of the one or more data nodes that is selected according to the metric.
2. The system of claim 1, the data structure is hierarchical.
3. The system of claim 1, further comprising a selection component that selects which of the one or more data nodes is processed for viewing.
4. The system of claim 1, the metric is associated with observed user activity.
5. The system of claim 1, the selected data node is represented by the description, which description is a one-dimensional view.
6. The system of claim 1, the data structure is associated with at least one of an operating system and a data repository.
7. The system of claim 1, the selected data node is associated with a play list.
8. The system of claim 1, the valuation is presented as at least one of a number, image data, audio data, coloration, and a character string.

9. The system of claim 1, the one or more data nodes are at least one of local to a first computing system, located remote from the first computing system, and distributed across multiple computing systems.

10. The system of claim 1, the description can be used to navigate to the associated data node by hyperlinking the description to the corresponding data node.

11. The system of claim 1, the metric is one of a plurality of metrics that are used for determining the valuation, which plurality of metrics include time created, that the node was accessed, time the node was accessed, that the node was modified, when the node was modified, that the node was copied, when the node was copied, an access frequency, and a number of unique users who have accessed the node.

12. The system of claim 1, the selected data node has the highest valuation.

13. A computer readable medium having stored thereon computer executable instructions for carrying out the system of claim 1.

14. A computer that employs the system of claim 1.

15. The system of claim 1, further comprising a classifier that facilitates automation of selected operations for the generation of the meaningful description by making an inference based on at least the metric associated with the one or more data nodes.

16. A system that facilitates the generation of meaningful names for a data structure, comprising:

a hierarchical data structure having a plurality of data nodes;

a valuation component that assigns a valuation to one or more of the data nodes in accordance with one or more predetermined metrics based at least on observed activity;

a selection component that selects at least one of the one or more data nodes with the desired valuation; and

a naming component that generates one or more names that represent at least one of the data nodes that is selected according to the one or more predetermined metrics.

17. The system of claim 16, the data node is represented by one or more meaningful names that are presented in a one-dimensional view.

18. The system of claim 16, the data structure is associated with at least one of an operating system and a data repository.

19. The system of claim 16, the valuation is presented as at least one of a number, image data, audio data, coloration, and a character string.

20. The system of claim 16, the selected data node is associated with a data path, which data path is defined by multiple data nodes each having one or more node designations, the one or more node designations are processed by the naming component to generate a one-dimensional representation of the selected node.

21. The system of claim 16, the naming component generates a plurality of flattened one-dimensional meaningful name outputs that correspond to multiple nodes that have been selected according to the assigned valuation.

22. The system of claim 16, the one or more names include metadata information representative of at least one of location data, relative time, recency, reoccurrence, and classification type.

23. A computer-readable medium having computer-executable instructions for performing a method of generating meaningful names of a data structure, the method comprising:

- receiving a data structure having a plurality of nodes;
- processing observed user activity associated with the plurality of nodes;
- assigning a valuation to each of the plurality of nodes;
- selecting one or more of the plurality of nodes that is associated with a predetermined valuation limit;
- extracting node metadata that is associated with the one or more selected nodes; and
- generating a meaningful name for each of the one or more selected nodes based on the respective node metadata.

24. The method of claim 23, further comprising outputting the meaningful name as a one-dimensional view.

25. The method of claim 23, the node metadata is in the format of at least one of a number, image data, audio data, a character string, and a word.

26. The method of claim 23, the data structure is a hierarchical data structure.

27. The method of claim 23, further comprising:

- learning a new observed user activity associated with the plurality of nodes; and
- assigning a new valuation for each of the plurality of nodes.

28. The method of claim 23, further comprising filtering out unimportant node metadata.

29. The method of claim 23, further comprising generating a first set of meaningful names for a first user and a second set of meaningful names for a second user, wherein the first and second sets of meaningful names are generated from the data structure and one of the same and different.

30. The method of claim 23, further comprising:
detecting a format of the node metadata; and
generating the meaningful name in at least one of the same format, a different format, and a combination of the same format and the different format.

31. The method of claim 23, the meaningful names are generated using at least one of a folder name and a file name that are associated with the each node of the plurality of nodes.

32. The method of claim 23, further comprising:
analyzing text of a document that is associated with the selected node; and
generating a meaningful name of that selected node based on a frequency that a word is used in the text of the document.

33. A system that facilitates the generation of meaningful names for a data structure, comprising:

- means for receiving a hierarchical data structure having a plurality of nodes;
- means for processing observed user activity associated with the plurality of nodes;
- means for assigning a valuation to each of the plurality of nodes;
- means for selecting one or more of the plurality of nodes that is associated with a predetermined valuation limit;
- means for extracting node metadata that is associated with the one or more selected nodes; and
- means for generating a meaningful name in the format of a one-dimensional view for each of the one or more selected nodes based on the respective node metadata.

34. The system of claim 33, further comprising:

- means for analyzing descriptors of one or more files and filenames that are associated with the selected node; and
- means for generating a meaningful name based on the descriptors associated with the files and filenames.

35. The system of claim 34, the descriptors are in the format of at least one of a number, image data, audio data, a character string, and a word.

36. The system of claim 33, further comprising:

- means for learning a new observed user activity associated with the plurality of nodes;
- means for updating the observed user activity with the new observed user activity; and
- means for assigning a new valuation for each of the plurality of nodes based on the new observed user activity.

37. The system of claim 33, the meaningful name includes metadata information representative of at least one of location data, relative time, recency, reoccurrence, and classification type.